**REAL ESTATE ACQUISITION**

by

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B.A. Architecture, Yale University
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ABSTRACT

This paper is addressed to students of real estate. Most individuals entering the profession will rely for a time on their employers to provide them with projects. At some point, however, many of them will decide to develop their own projects. It is hoped that this paper will be of considerable use at that time. Part of the paper is a primer, some of which may seem obvious to those who have been involved in acquiring property before. It is hoped, nevertheless, that these thoughts may provide a few new insights.

The other part of the paper develops a method for the rapid analysis of projects which should be of interest to all real estate professionals. This method incorporates an approach to quantifying risk which is believed to be superior to traditional sensitivity analysis. The analyses developed in this paper were refined over the course of locating and evaluating over 100 sites during the three month duration of this project.

The biggest obstacle to a novice developer is finding and putting together the first deal. This problem is compounded by the limited time which is available to accomplish the task. The hope of this paper is that the pointers and shortcuts presented here could cut a month or two off the time it takes to successfully complete such a search. Since a suitable property is usually found only after considerable effort, a month can easily mean the difference between finding a project and being forced to abandon the search.

Thesis Supervisor: James McKellar

Title: Chairman of the Interdepartmental Degree Program in Real Estate Development

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# REAL ESTATE ACQUISITION

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# CHAPTER ONE

## INTRODUCTION

This paper addresses the question of how one finds real estate development projects. Although it is a matter of fundamental importance to the profession, the process through which one locates and acquires property is very subjective and therefore difficult to quantify and communicate. It is a question on which the voluminous real estate literature is largely silent. The curriculum of the M.I.T. Center for Real Estate Development is comprehensive, but it too had difficulty addressing the subject. When the question was put to real estate professionals who were guest lecturers at the Center, they could recount some of their favorite anecdotes and make reference to a few calculations hastily scribbled on the back of an envelope, but they were usually unable to provide much information of practical use to the prospective developer.

Although the intent of this essay is to collect information of a general nature and broad applicability, real estate acquisition is a discipline which must be grounded in very specific local realities. The necessity of testing ideas and methods in practice during the course of doing this work has led to many examples and conclusions that are particular to the Boston metropolitan area in 1986. However, this should not preclude application in other market areas.

Boston at this time is one of the hottest markets in the country. Housing prices have gone up approximately 40% in each of the last two years. There has been a boom in commercial construction since about 1982. Although commercial space is now widely thought to be overbuilt, and housing prices seem to be leveling off, it is still very difficult to locate economically viable deals due to the rapid increase in prices. Although the lament that "all the good sites are gone" rings hollower as it is sung by each succeeding generation, it is fair to say that Boston is a very picked over market.

An active, mature market such as this requires the prospective developer to do a lot of legwork, analysis, and negotiation. In a cooler market he may be content to entertain a steady stream of inquiries from brokers, and follow up only the most promising opportunities. Many of the short cut analytical methods developed here will be quite useful in screening the large number of projects presented to a developer in a buyer's market.

The impending prospect of major changes in the tax code casts a long shadow over much of the work in this essay. Within a few weeks of the beginning of this research, the Senate Finance Committee sent to the Senate a bill which will revolutionize the real estate industry. Since final passsage is likely to come at about the same time as the submission of this thesis, the financial analyses contained in this paper have been largely restricted to before tax calculations. The new tax act will obviously bring about significant changes, and future work will have to take these into account.

For the sake of clarity a few terms should be defined before proceeding further. Masculine pronouns are used throughout this paper without prejudice to the actual gender of the individual referenced. The acquisitions specialist, or "buyer", is the person conducting the search for property. The acquiring entity, or "client", is the person or company on whose behalf the search is undertaken. The client is sometimes referred to as the "developer" in order to emphasize his role after the acquisition. The buyer's client can be his company, an institution, an investor, or even himself.

The author assumed the role of buyer in this search. The client was The Mount Vernon Company, a actual real estate consulting and investment firm based in Cambridge, Massachusetts. They are discussed in more detail in the following chapter.

# CHAPTER TWO

# PREPARATION

Before embarking on a search for property, the buyer must collect enough information to focus his efforts on projects which will be of interest to, and are within the capabilities of, the client. Some guidelines are necessary to winnow the overwhelming number of properties which are available at any given time down to a number which can actually be observed and analyzed. Preparation is the only thing which can bring this workload down to a managable size. Specific criteria are also essential to a buyer who wishes to search for projects on behalf of several clients without creating conflicts of interest.

## The Client's Capabilities

The buyer must establish the size and type of project the client is capable of handling. The size of project is largely a function of the amount of money the client wishes to invest in real estate. The buyer also needs to know the risk tolerance or aversion of the client. This can be used to estimate the capital structure which will be used in the deals. A capital structure of 10% equity and 90% debt is fairly aggressive. More conservative clients may prefer a 20% equity and 80% debt structure.

The client's risk tolerance or aversion will also determine the diversity of the portfolio. Well diversified clients may be able to tolerate investing all of their equity in a single project. Poorly diversified clients should hedge their risk by apportioning their equity among several deals. Unless the client is looking for a completely passive investment, the quantity and quality of talent available for project management will be an important concern. The size of project the client can afford may be bigger than the size of project he can manage with current resources. The client should be alerted immediately to the need to increase their capabilities or scale back their ambitions. This is a decision which must be faced early in the acquisition process.

The client's capabilities are influenced by their track record. A firm with a strong record in commercial real estate and plenty of talented personnel may find themselves wholly unsuited to residential development. Searching for the type of projects with which the client is familiar has many advantages. Lenders, brokers, sellers, and public agencies feel more comfortable, and the client can often provide valuable advice from their experience.

The clients' capabilities include whether they have the credibility and the staying power to pursue a difficult project. Their access to tenants will determine whether they can consider building or buying in an overbuilt market. Their reputation and experience will determine whether they can recruit joint venture partners on projects which are beyond the client's capabilities alone.

The capabilities which were used as criteria for this search were those of The Mount Vernon Company. They sought property with a value of up to three million dollars for their own account. They offer consulting services to major developers in order to recruit joint venture partners. As a result they can consider projects up to ten million dollars in joint venture. They have a staff of two, one successful development completed, and good access to commercial tenants.

## The Type of Property Sought

The next step in preparing for a real estate acquisition campaign is to determine the type of property sought. The client may have preferences among broad classes of development, such as residential, commercial, industrial, or retail. They may be interested in even more specialized categories, such as hotels, marinas, medical facilities, or mixed use developments. These preferences may be grounded in the client's interests and capabilities, or they may be driven by market forces, such as an oversupply of office space or a dramatic increase in housing prices.

The buyer should distinguish different types of clients. "Investors" purchase real estate for the revenue it produces, and consider the physical property only to the extent it secures the income stream. "Developers" assemble land, money, bricks, and mortar to create a whole that is greater than the sum of the parts. There are also persons on the periphery of the development profession who profit by rezoning property and gaining building approvals. This paper is largely confined to clients who are developers.

New construction subjects the client to a number of risks which are diminished or absent in existing buildings. It generally takes at least a year from the time the client ties up his money to the time the property produces any income. During this time many conditions, such as the market, the tax code, or interest rates may change. Another major risk is that the development may be rejected or delayed by the political, judicial, regulatory, and administrative process.

There is also substantial risk in the construction process. The work may be done poorly, or it may take much longer than expected. There may be work stoppages, or contractors may go out of business before the work is completed. Change orders submitted after the signing of a construction contract can be very expensive. New construction and land development is a risky, time consuming business which should be considered only by well capitalized, risk tolerant clients who can afford to wait for long range returns.

Developers may also buy existing buildings, make some improvements, and lease or sell it for a profit. This approach tends to diminish the uncertainties of an intervening period of time. Existing buildings generally produce income from the day of sale. Zoning and approval questions are usually not as much of a problem. Most renovations can be accomplished in less than a year and with minimal disruption of the income stream.

The Mount Vernon Company sought existing properties which could benefit from rapid, low cost improvements and aggressive leasing. They were interested in properties for commercial, residential, and retail projects. They were also interested in the conversion of industrial buildings to commercial or residential uses. Their main concern was getting their money in and out of a project quickly, which enabled them to make the most use out of a limited amount of capital. They did not wish to consider land development or land banking.

## The Desired Location

The next step in preparing to acquire property is to establish the locational guidelines which will be used to direct the search. If the client is familiar with the local market, he may be able to specify which communities or neighborhoods he considers suitable for his type of project. If the client is less knowledgable, the same information may be gathered from brokers with somewhat less reliability. The communities chosen may have an image or a reputation which is compatible with the types of project chosen, or they may be considered areas which are ripe for development.

Sometimes it is not possible or desirable to specify individual communities. The buyer must then use alternative criteria to narrow his search. The project may suggest a certain density of development, such as urban, suburban, or rural. The project may require the presence of certain amenities, such as water frontage, open space, or good local schools (for more discussion of amenities see the next chapter). There may be specific transportation needs, such as access to public transit, arterial highways, or railroad spurs. There may be specific infrastructure needs, such as sanitary sewers or high voltage power lines. There may be negative criteria, such as a desire to avoid rent controlled or high tax rate communities.

One good way to limit a very broad search is to impose a radius restriction. Many clients will not tackle a project that is more than a few hours drive from their base of operations. This allows them to attend meetings on site and monitor the project without overnight trips.

The Mount Vernon Company sought projects that were within two hours drive from Boston. Based on their knowledge and experience, the specific areas they were most interested in were Charlestown, Cambridge, Watertown, Waltham, Arlington, Belmont, Lexington, Winchester, Newton, the Chelsea waterfront, and the Wellington Circle area. They sought property which enjoyed distinctive amenities, such as attractive views of water, open space, or the skyline.

## Required Returns

### Lenders

In order to analyze projects, the acquisitions specialist needs to know the rates and terms which lenders are requiring for projects of his type. The lending institutions which should be checked include banks, mortgage companies, insurance companies, and pension funds. The buyer should check not only the rates on various types of loans, but the number of points charged, the term, the amortization period, and the lending limit. He also needs to know the types of projects which the lender finances, the capitalization rates which they are currently using, and the returns which they expect to see in a viable project. Appraisers and brokers are other useful sources of this information.

There are a number of publications which list the interest rates and terms charged by banks on their real estate loans. Local newspapers often publish a list of banks' terms for residential mortgages. There are several newsletters, such as Crittenden Income Property Deals <Crittenden Publishing, Inc., P.O. Box 1150, Novato, CA 94948 (800) 421-3483> and Money Market Matrix <George Fantini, Boston Financial Group>, which list the rates and terms charged by lenders for different types of loans to commercial and industrial projects. Banker and Tradesman publishes the terms of all recent local financings.

## Equity Investors

The buyer needs to know what returns equity investors are requiring for projects of the type which is being sought. This can usually be determined by a survey of comparable investments. He should talk to knowledgable investment advisors or syndicators about the type of project they are considering. By looking over the prospectuses of comparable projects the buyer can determine the returns which were necessary to attract equity capital to that type of project.

The returns to equity investors will vary with the level of risk and the current tax structure, and will tend to move with the returns from alternative investments, such as stocks and bonds. The numbers should be adjusted as appropriate for the present project and market. Many investment advisors, private placement specialists, and syndicators will offer an estimate of the amount of capital which they could provide to a project, and the terms under which it would be available. Even when they make a firm commitment, however, it is usually only on a "best efforts" basis.

**The Client**

It is very important for the buyer to define the methodology, such as return on equity, internal rate of return or net present value, which will be used to evaluate the client's returns from potential projects. If net present value is used, the discount rate or hurdle rate must also be determined. When the methodology has been established, the decision criterion or threshold return which will be used to edit or select projects must be established. This may be a simple minimum return, such as a 10% return on equity (ROE) in the first year, or a more complex criterion such as a 20% after tax internal rate of return (IRR), or a positive net present value (NPV) at 15% on a five year pro forma.[1]

One of the problems of establishing this information is that clients tend to overestimate the returns they require. This can lead the buyer to reject projects the client would actually consider competitive. One way to determine whether this is the case is to ask the client for the initial financial analyses of the last few deals they accepted. The returns which were projected for those projects should be adjusted to reflect current conditions and can then serve as guidelines for future projects.

### Joint Venture Partners

When a joint venture is contemplated, the client must know how much of an interest the partner will demand for his participation. This can usually only be determined by direct negotiation. The developer who will be contributing less than half the equity to the project should ask for half of the joint venture. Of course, this is only the starting point of a negotiation which will almost certainly arrive at a different distribution. The developer who is contributing more than half of the total equity to a venture should look for limited partners before joint venture partners.

In a joint venture negotiation one of the most difficult problems is valuing the vision and initiative which enabled the developer to find the project. This is an especially difficult problem if he does not yet have firm control of the property. Many joint venture partners will regard a person who approaches them without site control as naive and exploitable. Although this is always a matter of negotiation, a developer who is offered less than 10% of a deal which they initiated should probably shop around for another joint venture partner.

It is important to have the joint venture agreement negotiated and signed before the partner becomes an active participant. After a partner has materially participated in a project he has acquired some rights to it, and the developer has lost the leverage of site control. The partner may now demand a reduction in the developer's interest without fear that the deal will be taken to someone else.

The Mount Vernon Company did not have fixed criteria for investment returns. Given their interest in rapid turnover, however, first year return on equity was a more valuable method of analyzing their returns than discounted cash flow analysis. Anything with better than an 8% cash on cash return was treated very seriously. Permanent financing was assumed to be available in the form of 30 year fixed rate loans at 10.50% and one point, with a limit of 80% to 90% of project value. Construction financing was assumed to be available as an interest only drawdown account at 12% and one point. Capitalization rates were assumed to be between 9% and 10%, with normal projects being capitalized at 9.5 percent. Limited partners were scarce because of the uncertainty surrounding tax reform, however, joint venture partners were available.

# CHAPTER THREE

## GENERATING LEADS

Once the buyer has a valid set of criteria to work with, the next step is to identify property which meets this criteria. There are many methods which should be used to pursue this goal, but one rule should be regarded as absolute: the buyer must always visit the site of any acquisition which is being seriously considered.

### Direct Observation

The most consistantly productive technique for identifying prospective development sites is to go into the field to observe areas which have been identified as being of interest. Such excursions should be part of any approach to an area with which one is not familiar. They should be an integral part of the methodology of an acquisitions person who anticipates doing business in an area over a long period of time. If time pressure is not a concern these trips can scheduled informally as enjoyable breaks from the office routine. Of course, the successful acquisitions specialist is constantly alert to attractive land and buildings whenever travelling in their work or leisure.

When touring for sites it is often valuable to have a partner or two. An assistant can handle the mundane tasks of driving or taking notes. A more knowledgable companion can share the job of identification. Such an arrangement provides independant assessments of each potential acquisition. The opportunity to give and recieve criticism on the site is an extremely valuable tool in editing the number of sites down to a manageable number. It magnifies the speed at which sites can be viewed and the number of sites which will be observed on any given tour.

It is possible to conduct such a tour for sites alone, although the quantity of sites and the quality of the observation is diminished. In such cases the buyer should take along a dictaphone or tape recorder to record observations in detail, relieving him of the task of note taking in addition to observing and driving. The tape can later be transcribed for use as reference notes, and coordinated with the buyer's overall impressions and the visual record of the trip.

## Site Amenities

Many properties have no special amenity which will command a premium in price. An amenity which can command such a premium is an extraordinary view. There are three types of views which significantly increase the value of a property: views of water, views of the horizon, and views of open space. The buyer in search of property with above average potential would be wise to concentrate his efforts on areas which enjoy these amenities, as well as being constantly alert to their presence in any site observed. The buyer should also keep in mind that the desired view is often less apparent from the street, and depends on the height of the structure which is to be sited on the property.

### Views of the Water

The buyer in search of water views should begin his reconnaissance by navigating the nearest public right-of-way to the water, such as driving along a coastline or circling around a lake. When scouting a river or stream both banks should be driven whenever possible. This observation will usually provide a good idea of the property types, such as single family housing, which occupy the best sites. Property which enjoys such superior location and which does not seem to be developed or maintained to the prevailing standard is a candidate for acquisition.

The buyer should observe not only property which is adjacent to the water, but also property in more distant locations which enjoys a unobstructed view of the water. Often the only place from which such scattered and distant sites can be observed is at the water's edge, or even upon the water. It is not unreasonable for a buyer who is interested in a site with a view of a specific body of water to charter a boat to make observations from upon the water itself.

### Views of the Horizon

The buyer in search of views of the horizon should go into the field to observe the higher points of land which are likely to afford such views. There is really not much point in trying to determine this information (except in the most general terms) from documents such as topographic maps. The views sought include vistas which, while not extending out to the natural horizon, nevertheless afford a more interesting view than that of the neighboring subdivision. Particular attention should be paid to major elements of the landscape, such as mountains, landmarks, or the downtown skyline. Sites which offer a commanding view of the sunset or an unobstructed southern exposure tend to command a premium, expecially in residential projects.

**Views of Open Space**

The buyer in search of views of open space has several options. The simplest and least expensive forms of open space are existing parks, reservations, watersheds, and other undevelopable areas. The premium enjoyed by neighboring land will depend on the size and attractiveness of the open space. It will also depend on whether the open space can be used by the neighbors or whether it comprises only a visual amenity.

A more difficult and expensive method of acquiring land which commands a premium due to its proximity to open space is for the developer to create the open space as part of the development plan. This is common in planned unit developments (PUDs), but it is often questionable whether the open space so created is of sufficient size, attractiveness, and usefulness to create a significant premium on the adjacent land. A more adventurous method of creating such value is to build a golf course as part of the development. Sites which offer a view of, and membership in, a golf course command a significant premium in property values. This premium can be enough to justify the expense of creating the golf course, but the threshold of profitability occurs only in very large developments. Additional methods of creating such value include the donation of land to public or charitable trusts, which provides a tax deduction, and deed restrictions.

## Networks and Contacts

Networks and contacts are invaluable resources for finding property. They have the advantage of being very effective while expending little time on leg work and wasted effort. When property is referred through one's contacts it has already been tested once for viability and appropriateness. Developers who have no pressing need for a deal may be content to wait for their network to produce a suitable project. This is why many developers seem to be able to say so little about the acquisition process: they network instinctively, and the deals just seem to come to them. The only drawback to the network approach is that it cannot be relied upon to produce a deal within a set period of time.

Networks require a great deal of care and maintenance. The buyer should try to meet as many people in the real estate business as possible. Informal or "informational" interviewing is a good technique which can rapidly expand one's acquaintances and illuminate the local power structure. It is especially valuable for those just starting out. Social gatherings are an important and enjoyable part of networking which should not be overlooked. If one is not being invited to appropriate social occasions, the quickest solution is to create one's own. A successful party tends to generate a respectable number of reciprocal invitations.

In order to fully develop a network, the acquisitions specialist must be free from the notion that cultivating people is disreputable or exploitive. One way to do this is for the buyer to sincerely aim to contribute at least as much as he benefits from the network. He should refer interesting deals to his contacts, be available for advice and consultation, and try to help them in any way possible. This attitude will help develop an atmosphere of productive reciprocal exchange among the members of the network.

## Brokers

Most of the property which is on the market at any given times is listed with one or more brokerage firms. Brokers are the most valuable resource for locating willing sellers. Unfortunately, most brokers are familiar enough with real estate finance to price property at or above the level at which it is economically viable. This is due in part to the fact that brokers must compete for seller's attention by claiming they can get a higher price, and in part to their vested interest in getting the highest possible price as the basis for their commission.

The buyer who employs a shotgun approach to contacting brokers can easily find himself deluged with offers. Even a buyer who is using rapid analytical methods, such as those described in this paper can easily find himself overwhelmed by the necessity of visiting the more promising sites. It is therefore necessary to communicate to brokers fairly specific criteria for the types of projects which are likely to be of interest.

It is also advisable to establish criteria for the types of brokers with which one will do business. Most brokers specialize in certain geographical areas and property types. The buyer should seek out those brokers who concentrate on the property which interests him. Smaller brokerage firms are usually located in the neighborhoods where they specialize. A good list of such brokers can be culled from the local telephone directory, and the buyer can identify those who list properties which are suitable for his purposes.

Large properties are often listed with large brokerage firms which are located outside the project area. Good firms in this category can be identified through the buyer's network or through advertisements in real estate publications (see the following section). Finding the right broker in a large brokerage house, however, can be as difficult as locating a good smaller brokerage firm.

The buyer should carefully consider a broker's reputation in deciding whether to do business with him. The business practices and styles of brokers run the gamut from straightforward and honorable to dissembling and sleazy. Whenever possible, a buyer should prepare himself for negotiations by checking a brokers reputation with his contacts. Disreputable brokers should of course be avoided. If there is no way to avoid such a broker, the buyer should approach any project with suspicion, and structure his business dealings so that his association with the broker does not carry any undue risk.

Brokers are an invaluable source of real estate information. Local brokers often know every property and recent transaction in their neighborhood. This can be of great benefit to the buyer who is uncetain about the market for a project. The buyer must keep in mind, however, that the broker is an agent of the seller who is obligated to present the property in the most favorable light. Information recieved from a broker should always be verified. In the course of this search one broker made a written representation that a property had a permissable floor area ratio of four, when in fact the floor are ratio was one.

Brokers try to create an atmosphere of trust with a potential buyer. This can lead the buyer to disclose important information about their bargaining position. The broker has a fiduciary duty to disclose this information with the seller. Avoid letting a broker know information which can be used against you, such as the maximum amount you will pay or a deep desire to acquire a specific property. Letting a broker know that you have plenty of alternatives, however, can be a good way to soften up a seller.

Perhaps the greatest danger in dealing with brokers is that they will waste the buyer's time on inappropriate or unfeasible projects. This is a bit strange, since brokers depend heavily on commmissions and can ill afford to spend their time on anything which is not likely to lead to a sale. Nevertheless, some brokers feel compelled to try to sell something, even if nothing suitable is currently listed.

The buyer should give a broker specific criteria and let him know that he will not waste the broker's time on projects that he is not likely to buy, but that he expects the broker to show similar respect for his time. If a broker violates this covenant too frequently his entreaties should be ignored. With such reciprocal understandings the buyer can get many brokers acting as his eyes and ears without inundating himself with more opportunities than he can analyze.

## Newspapers and Periodicals

Most brokers advertise their listings in one or more publications. For example, in the Boston area, Banker and

Tradesman and The New England Real Estate Journal have the most extensive commercial classifieds. The Boston Business Journal carries a smaller number of advertisements. The Boston Globe has the most comprehensive listings of smaller residential property. Many residential properties are also listed in suburban newspapers and free publications distributed through realtors and local stores.

## Public Agencies

Most localities have zoning, planning, or redevelopment agencies which have control over development. For example, the Boston Redevelopment Authority (BRA) has jurisdiction over every project in Boston that needs some form of zoning relief. The buyer should cultivate a good working relationship with the people in such authorities. Their assistance can be useful in locating certain types of projects, and invaluable when taking a development through the approval process.

Friends in the BRA can provide advance information about projects which will be made available. The can warn the buyer away from projects which are extraordinarily risky, or competitions which have been politically wired to go to someone else. They can identify potential sources of community opposition and suggest workable solutions. They can help with many public sources of financing. They are also helpful with matters from mailing a "Request For Proposals" to finding out the zoning of a property over the telephone.

The developer's attitude is very important when dealing with public agencies such as the BRA. One BRA official described the way to do business with the authority as, "Spend the first three meetings saying yes." <the remark was made, half-jokingly, at the "Winners and Losers in Changing Real Estate Markets" Professional Development Course at M.I.T. in July, 1986>. The buyer should avoid the excesses of both too humble and too haughty an approach.

The buyer should consider getting himself elected or appointed to a seat on the local planning or zoning board. It gives him a chance to see every major development which comes through town, and meet all the major developers who are doing business at that time. He will get to know what kinds of projects are likely to be accepted, which are not, and why. Although one must be careful to avoid any conflict of interest or quid pro quo, developers who got a receptive hearing during the buyer's tenure are likely to treat remember him fondly in the future.

## Foreclosure Sales and Auctions

The Internal Revenue Service auctions the property it has seized for nonpayment of taxes. Notices of such auctions are published in the legal notices section of papers such as The Boston Globe and Banker and Tradesman. The rules of the auction require the successful bidder to pay the back taxes, and generally allow the owner to reclaim the property by repaying the bidder taxes plus interest.

The buyer can also approach the owner of the distressed property directly and try to strike a deal before the auction. This offers the buyer considerable negotiating leverage.

Other agencies which foreclose or auction property include the Department of Housing and Urban Development (HUD), the Federal National Mortgage Association (FNMA or "Fannie Mae"), the Federal Deposit Insurance Corporation (FDIC), and the Small Business Association (SBA). The Veterans Administration does not auction property, but it does compile a list of repossessed property which it has for sale. The availability and prices of such property can be checked by calling (617) 223-3052 or (617) 223-3053. It is best to call every two to three weeks.

Local communities also sieze and auction property for the nonpayment of real estate taxes. New York City has 10,000 such properties. It is important to remember that there is often a good reason for the previous owner to have walked away from his investment. The buyer should try to distinguish defaults due to property distress from those due to owner distress. The latter are much more promising opportunities.

Foreclosures and auctions are not a particularly valuable resource in Boston because they tend to be very well attended. The audience includes a large number of real estate professionals as well as laymen. This means the opportunity to find bargains is greatly reduced. Indeed, negotiation theory suggests that, in large auctions, the winning party often pays more than the property is actually worth.

# CHAPTER FOUR

# ANALYSIS

Once a site has been identified, and has been judged to meet the basic criteria for acquisition, the next task is to perform several analyses to determine whether the project is likely to be feasible.

## Analysis of Ownership

### On Site Inquiry

The most direct method of determining the ownership of property is to call on people at the site. If that is unsuccessful, or if there is no one at the site, the neighbors can often be helpful. The needed information can also be obtained from local merchants, brokers, public officials, and even the mailman.

One of the advantages of this technique is that friendly respondants often provide a wealth of information on the site, who owns it, who they acquired it from, when they acquired it, and how much they paid for it. They often know the development history of the site, including past attempts at development, present development plans, and community sentiment towards those plans. They can also often provide background information on the seller. Information which indicates a seller's potential interest in a sale, or the deal structure that would be most appealing is especially valuable.

The greatest disadvantage of this technique is that it tends to attract a lot of attention. This attention can have a number of unwanted side effects. It often alerts the owner, allowing him time to form opinions before the buyer can make his presentation. It provides the owner time to research the property's value and solicit competing offers. This can set off a stampede among brokers, who will clamor for his attention by telling him they can get more for the property than is realistic. Early disclosure of a buyer's interest can create unease among the neighbors, who may pressure the owner not to sell. It can also stimulate public officials, who may respond by rezoning the property, imposing a moratorium, or taking it by eminent domain.

**Title Search**

Determining the ownership of property through a title search has the advantages of reliability and, if properly handled, secrecy. The main disadvantage is that it involves a certain amount of legwork and lost time. This problem can be resolved by enlisting the aid of a person or organization which specializes in such work.

The Registry of Deeds

The Registry of Deeds is the definitive source of information on the ownership of property. Even if information has been gathered from other sources it should be verified here. The information at the Registry of Deeds, like that at the Assessors's office, includes who owns the property, when they acquired it, and how much they paid for it. The information at the registry will also include liens against the property, rights-of-way, easements, recorded covenants, recorded leases and options, first mortgages, and purchase money mortgages. The Registry also keeps records of limited partnerships listing the partners and their capital contribution.

The Assessor's Office

When the detailed information of the Registry of Deeds is unnecessary, another way to determine the ownership of property is through the local assessor's office. The property records in most towns have been computerized, and printouts are available in several volumes at city hall. Privately owned property is generally listed by number and street. Tax exempt property is often listed by the institution which owns it. The information at the Assessor's Office also includes the assessed value and the tax paid on the property, which can enable the buyer to find out how it is taxed.

The Registry of Deeds and the Assessor's Office are usually quite busy. When looking up records, the buyer should be aware of everyone else who is in the room. Even in an empty office, a municipal employee is often looking on as a property is being looked up. Such attention is not always benign. These officials are keenly aware of real estate activity in their town. They can be valuable sources of information, but a great nuisance if the object of one's attention must be concealed. There is good reason for the buyer who is in search of undervalued property not to let anyone know which properties interest them.

This concern applies to everyone in the room when you are researching titles. They may include developers, lawyers, and underwriters. Among these people, it is almost a sport to try to figure out what property their neighbor is researching. Some tactics which can be used to direct attention away from what really interests the buyer include asking for the wrong map, looking in a different file or a different place in the book, leaving the book open to the wrong page, discussing a different property with your companions, and taking coded notes. The acquisitions specialist should use a one page form for recording the information in a title search. The form insures that you will get all the information, and saves time in writing and labeling. The one page format prevents more than one record from being exposed at a time. A suggested format is shown on the following page.

Exhibit One

Property Addresss:

Owner:

Address:

Phone Number:

Book:

Page:

| | | |
|---|---|---|
| Assessment: | Land | ______________________ |
| | Building | ______________________ |
| | Total | ______________________ |

Taxes:

Square Footage:

Comments:

## Zoning Analysis

One of the first things which should be done when evaluating a potential acquisition is to obtain a copy of the zoning bylaws and map from the jurisdiction in which the property is located. The zoning bylaws will detail the regulations, such as density, use, parking, height, and setback restrictions, which must be complied with in order to develop the site. They will also describe the process which must be followed, and often estimate the time it will take to complete.

The buyer should examine the zoning map to see if the zoning of adjacent sites is compatible with his property. If neighboring sites are zoned for development that is likely to degrade the value of the acquisition, the buyer may want to search for alternative locations, since upgrading his property will enhance the value of surrounding sites and make their development more likely. The zoning map can be a very useful tool for locating sites if the buyer's criteria can only be accomodated in a few zones.

### As-of-right Zoning

It is commonly assumed that one of the things which one acquires with real estate is the ability to build a certain amount "as-of-right". This is often very far from the case. Often, the last thing the community wants is to have the site developed to its maximum as-of-right potential. There are many more ways for opponents to prevent such development than there are remedies for the developer who is confronted with the opposition. Delay, even on spurious grounds, is often enough to kill a project.

The maximum development potential is often decided not by the floor area ratio, but by open space, setback, parking, or other provisions. For example, the town of Arlington permits a floor area ratio of 4 in a M-1 zone, but the parking requirement of one car per 350 square feet, in conjunction with a height restriction of 40 feet, effectively limits development to an FAR of 0.67 unless the developer can afford to build structured parking. The buyer should be alert to these less obvious limitations. He should also search carefully for provisions which allow a bonus in return for the inclusion of certain public amenities.

**Nonconforming Uses**

In many communities the advent of zoning, or later rezoning, created nonconforming uses which do not comply with current zoning regulations. These properties are almost always allowed to continue undisturbed, or "grandfathered", as long as the building and use remain unchanged. Changing or discontinuing the use, or undertaking construction or renovation, however, will often trigger the current zoning requirements. This can force the client to scale back his plans or seek some form of zoning belief. The buyer should not assume that because a building exists it necessarily complies with current regulations.

## Zoning Relief

### Rezoning

Rezoning involves changing or amending the zoning bylaws or map. It is a risky and time consuming process, usually requiring the vote of several political bodies. Even if approved, a rezoning is subject to legal challenge on the grounds that it constitutes "spot zoning", which is illegal. Rezonings are most likely to be successful when the property adjoins a site with the desired zoning, since such cases involve only adjusting the boundary, rather than creating an entirely new zone.

### Variances

Variances are used to provide some flexibility in the zoning process. They are typically sought when the details, rather than the fundamentals, of a development do not conform to the current regulations. They are sometimes sought on the grounds that the existing zoning creates a hardship, given the unique characteristics of the property. Variances are typically granted when a project complies with the spirit, if not the letter, of the law, and they are frequently used to leverage other concessions from the developer.

### Special Permits

Special permits, or conditional uses, are employed to give a town greater control over certain types of development. They are typically used to restrict uses such as bars or body shops which a town wishes to consider on a case by case basis. It is not unusual to find that such a use is not permitted in any zone, except by special permit. Special permits usually apply to the use of a property, rather than its physical development. As in the case of variances, however, the town often uses the granting of a special permit to extract certain concessions from the developer.

Planned Unit Developments

Planned unit developments (PUDs) are a relatively recent innovation which was designed to accomodate relatively large residential developments in a form other than tract housing. The developer is typically allowed to cluster condominium units more densely than would otherwise be permitted in return for the provision of open space and/or other public amenities. The appeal of this type of design, and the savings in infrastructure an construction costs, should be considered when planning a large residential development. If the town does not have a planned unit development section in its zoning bylaws, the buyer should consider proposing one.

The client should begin discussions of his plans with local officials no later than the point at which he gains control of the site. If possible, informal discussions should be initiated even earlier. These conversations should be kept friendly and cooperative. The client should present all of his plans as tentative. Architectural presentations should not display a level of finish or detail which suggests that they cannot be changed. It may even be possible to build at a greater potential than that which existed as-of-right because the town is willing to cooperate in building another type of development. An early cooperative approach minimizes later conflicts with the regulatory authorities.

## Market Analysis

### Brokers

One easy method of determing the rent which a property will command is to call a broker who is representing a comparable property in the immediate area. This can require a certain amount of subterfuge, since brokers are often unwilling to discuss such information with anyone they do not think is a potential tenant. They are especially unwilling to discuss effective rents with developers of competing projects or their agents.

### Published Information

Newspapers and periodicals can be used to quickly gather information about the market for a real estate development. For example, The Boston Globe classifieds provide good information on residential rents and the prices of houses and condominiums throughout the region. The commercial advertisements in Banker and Tradesman and The

New England Real Estate Journal can be used to calculate rents per square foot, building prices per square foot, and land prices per acre. Other sources of this information include The Boston Business Journal, New England Business, National Real Estate Investor, and Institutional Investor, although they do not have as much advertising. Banker and Tradesman's listings of the week's activity at the Registry of Deeds provides the most accurate and up to date information on the values actually achieved in recent transactions.

**Market Studies**

Few prepared market studies have ever concluded that there was not a market for the development. Few feasibility studies have ever concluded that the development was unfeasible. Few clients consider collecting such information before they acquire a property and decide how they will develop it. Developers are eternal optimists who do not like being told that their project is inadvisable!

Formal market studies are usually prepared only to satisfy the requirements of lenders. Even the lenders seem less interested in the genuine marketability of a project than in limiting their potential liability in the event of default by cloaking their subjective decision in the mantle of a tangible and allegedly objective study.

The buyer should therefore not waste too much time on formal market studies. If the client's projections do not seem completely out of touch with reality after a check of comparables, they should be accepted as given. It is frustrating and futile to argue with a client about the market for his project. If he doesn't like the buyer's market assumptions, he can always hire someone else. The buyer should deal with this problem by accounting for uncertainty over the market for a building in the financial analysis.

## Financial Analysis

### Purpose of Analysis

The purpose of financial analysis is to assign a value to a project which can be used to rank the project among alternatives, and to calculate the price the buyer would be willing to pay for the investment. The initial analysis must be able to rapidly handle a large volume of projects in order for it to perform its sorting and ranking function. It must be designed to accept the incomplete and imperfect information which is generally availability at the inception of a project. It must be easy to use and provide a variety of information which is understandable and useful. Finally, the ideal acquisition analysis must find a way to quantify uncertainty in a way which is meaningful to the user.

### Method of Analysis

The most efficient way to analyze a large number of projects is to use a computer. Once this decision has been made, the next question is what kind of software to use. There are a number of real estate software packages on the market, but they are all much too cumbersome and inflexible to perform the initial analysis.

The alternative to packaged software is to design one's own. This can be done by programming in computer languages such as Basic, Fortran, Cobol, or C, or by using supporting software such as Lotus, Javelin, or Multimate. Programming in computer languages takes much more time and is difficult to quickly alter for an unusual case. Lotus 1-2-3 was chosen as the supporting software for the analyses in this paper; it has become the standard business software throughout the country, and not without good reason. Lotus Symphony has a better method of presentation, but it requires more memory than is available on many computers, notably those at The Mount Vernon Company, and most of those at the Center for Real Estate Development.

In creating the financial analysis one objective was to design a format which would present the information in a minimum amount of space, preferably on a few screens. Data input should be solicited in the same order that it is generally received. Return measures should be displayed on the same screen, so that the user can see the effect of changes in the inputs without having to locate numbers in another part of the spreadsheet. The overall objective was to design a system that could indicate whether a project was worth investigating, and even construct a preliminary offer, in the course of a brief telephone conversation.

Because a single small worksheet could not possibly handle the many types of projects available, different templates were constructed for various broad classes of deals, such as office, condominium, and land development. Although these worksheets share many features, each responds to the peculiarities of its type of project.

**Risk Analysis**

The most difficult proposition was to find a method to quantify uncertainty in a way that is meaningful to the user. The most common approach to this problem is to use sensitivity analyses to test different scenarios. Unfortunately, such analyses do not produce any data on the total level of risk in a project. They also do not provide any measure which can be used to compare the risks of two very different projects. Finally, they do not produce any information which can be used by the buyer to adjust his bid.

These problems can be overcome by assuming that the actual performance of uncertain variables will be normally distributed from an intelligent analyst's projections. The uncertainty of these variables can be estimated by the analyst, or it can be calculated from a database of bids, comparables, or past experiences. The only variable which is not likely to display a normal distribution is vacancy, which, because it is often assumed to be 5%, is likely to by slightly skewed towards the right, or higher vacancy. This seems a tolerable imperfection in the model, when considered against the usefulness of such an analysis. This paper leaves the task of testing the normal distribution of variables to others.

The financial worksheets designed for this paper have a risk analysis module, contained in one screen, which lists the variables, such as rents, construction costs, operating expenses, vacancy rates, and capitalization rates, which are likely to be the most uncertain. The analyst is asked to estimate this standard deviation of these variables. His guess should encompass about 68% of the possible outcomes. The analyst is also asked to specify the covariance between variables, such as construction cost and rents, which are likely to affect each other. This can be estimated by a regression analysis which calculates the degree to which their behavior is linked.

When the analyst has finished estimating these parameters he types "Alt-S". This sets into operation a program which runs a sensitivity analysis on the uncertain variables in another part of the worksheet. The results of this analysis are used to calculate a sensitivity coefficient for each variable. The square of the product of the sensitivity coefficient and the standard deviation is a statitistically meaningful index known as variance. The program also calculates the reduction in variance due to any correlations between dependant variables.

Variance has the important advantage of being additive. The sum of the variances of each of the variables minus the reduction due to covariance is the total variance in the project's returns. The square root of the total variance is the standard deviation of the project returns. This means that there is a 68% probability that the returns will fall within the range of the standard deviation. This number is returned to the main worksheet in a form which can be used to evaluate the riskiness of the project. The program also calculates the range of possible returns at the standard deviation. All of this is done automatically by the program, which takes about a minute to run.[2]

# Exhibit Two (A)

Project: Office Development Template

| | | | |
|---|---|---|---|
| Asking Price | 3,200,000 | Price/SqFt Land | 80.00 |
| Land Area | 40,000 | Price/SqFt Building | 100.00 |
| Floor Area Ratio | 0.80 | Buildable SqFt | 32,000 |
| Efficiency | 85% | Usable SqFt | 27,200 |
| Renovation Cost/SqFt | 2.00 | Renovation Cost | 64,000 |
| Rent/SqFt | 18.00 | Gross Rent | 489,600 |
| Vacancy | 5% | Effective Rent | 465,120 |
| Operating Expenses | 27% | Net Operating Income | 339,538 |
| Debt Coverage Ratio | 1.20 | NOI After Debt Service | 37,279 |
| Required Return | 12.0% | | |

----------------------------------------------------------------------

| | Asking | Low | Medium | High |
|---|---|---|---|---|
| Price | 3,200,000 | 2,779,000 | 2,999,000 | 3,219,000 |
| Equity Required | 512,000 | 91,000 | 311,000 | 531,000 |
| Return on Equity | 7.3% | 41.0% | 12.0% | 7.0% |

| | | | |
|---|---|---|---|
| Suggested Bid | 2,999,000 | Plus or Minus | 220,000 |
| Uncertainty | 7.3% | | |

| Financing | Permanent Loan | Purchase Money Mortgage |
|---|---|---|
| Principal | 2,577,674 | 200,000 |
| Points | 1 | 0 |
| Loan Proceeds | 2,551,898 | 200,000 |
| Interest Rate | 10.50% | 9.00% |
| Amortization Period | 30 years | 30 years |
| Annual Payment | 282,948 | 19,311 |
| Term | 10 years | 7 years |
| Debt Coverage | 1.20 | 1.12 |

Construction

| | |
|---|---|
| Amount | 64,000 |
| Interest Rate | 12.00% |
| Points | 1 |
| Term | 12 months |
| Avg. Outstanding Balance | 45.00% |
| Construction Interest | 3,456 |

# Exhibit Two (B)

| Input Parameter | Mean | Standard Deviation | Sensitivity Coefficient | Variance |
|---|---|---|---|---|
| Con. Cost | $2.00 | $1.00 | (32,000) | 1.02E+09 |
| Rent | $18.00 | $1.00 | 167,971 | 2.82E+10 |
| Expense | 27% | 3 % | (41,418) | 1.54E+10 |
| Vacancy | 5% | 3 % | (31,826) | 9.12E+09 |
| Subtotal of Variance | | | | 5.38E+10 |
| Reduction of variance due to correlation between renovation cost and rent--coefficient= | | | 0.50 | 5.38E+09 |
| | | | | =========== |
| Total variance | | | | 4.84E+10 |
| Mean | | | 2,998,553 | |
| Standard deviation | | | 220,041 | |

SENSITIVITY TABLES

| Cost/SqFt | +PRICE | |
|---|---|---|
| 1.00 | 3,030,553 | (32,000) |
| 2.00 | 2,998,553 | (32,000) |
| 3.00 | 2,966,553 | |

| Rent | +PRICE | |
|---|---|---|
| 17.00 | 2,830,582 | 167,971 |
| 18.00 | 2,998,553 | 167,971 |
| 19.00 | 3,166,524 | |

| Op_exp | +PRICE | |
|---|---|---|
| 26.0% | 3,039,971 | (41,418) |
| 27.0% | 2,998,553 | (41,418) |
| 28.0% | 2,957,136 | |

| Vacancy | +PRICE | |
|---|---|---|
| 4.0% | 3,030,379 | (31,826) |
| 5.0% | 2,998,553 | (31,826) |
| 6.0% | 2,966,727 | |

(1)

| Asking | +ROE | +EQUITY | |
|---|---|---|---|
| 2,779,000 | 41.0% | 91,000 | 0 |
| 2,999,000 | 12.0% | 311,000 | 0 |
| 3,219,000 | 7.0% | 531,000 | 0 |

MACROS

```
\S  {GOTO}TABLE1~/XG\Q~

\Q  /C~AA8~/XIAA8=-1~/XG\V~
    /C~AA13~/C~AA15~/C~AA17~
    {GOTO}
              (1)              (INPUT CELL)
    0~{EDIT}{CALC}~
    {END}{UP}
    /DT1{BS}.{END}{RIGHT}
    {END}{DOWN}~
    Vacancy                    (INPUT CELL)
    ~{GOTO}
    Vacancy                    (INPUT CELL)
    0~+
    Vacancy                    (INPUT CELL)
    ~{END}{DOWN}{END}{DOWN}
    /XG\Q~

\V  {GOTO}BID0~{EDIT}{CALC}~
    {END}{UP}
    /DT1{BS}.{END}{RIGHT}
    {END}{DOWN}~ASKING~
    {GOTO}BID0~+BIDVAL0~
    {GOTO}1~{UP}{UP}{UP}/XQ~
```

# Exhibit Three

Project: Apartment Development Template
By: Eric A. Knapp
Date: 15-Aug-86

| | | | |
|---|---|---|---|
| Asking Price | 2,300,000 | Price/SqFt Land | 57.50 |
| Land Area | 40,000 | Price/SqFt Building | 47.92 |
| Floor Area Ratio | 1.20 | Buildable SqFt | 48,000 |
| Efficiency | 85% | Usable SqFt | 40,800 |
| Construction Cost/SqFt | 2.00 | Construction Cost | 96,000 |
| Apartments | 42 | Average SqFt/Apartment | 971 |
| Avg. Monthly Rent/Apt. | 750 | Rent/SqFt | 9.26 |
| Gross Rent | 378,000 | Price/Apartment | 54,762 |
| Vacancy | 5% | Effective Gross | 359,100 |
| Operating Expenses | 27% | Net Income | 262,143 |
| Cap Rate | 9.5% | Project Value | 2,759,400 |
| Mortgage Ratio | 80% | Loan | 2,207,520 |
| Interest Rate | 10.50% | Payment | 242,317 |
| Note | 150,000 | Note Payment | 14,483 |
| Note Interest Rate | 9.00% | NOI After Debt Service | 5,343 |
| Required Return | 12.0% | | |
| Equity Required | 38,480 | ROE At Asking Price | 13.9% |
| Bid Value | 2,306,046 | Plus or Minus | 159,536 |

| Input Parameter | Mean | Standard Deviation | Sensitivity Coefficient | Variance |
|---|---|---|---|---|
| Con. Cost | $2.00 | $0.50 | (48,000) | 5.76E+08 |
| Rent | $750 | $50 | 3,164 | 2.50E+10 |
| Expense | 27% | 1 % | (32,503) | 1.06E+09 |
| Vacancy | 5% | 2 % | (24,976) | 2.50E+09 |
| Cap Rate | 9.5% | 5 tenths | 1,987 | 9.87E+07 |

| | | |
|---|---|---|
| Subtotal of Variance | | 2.92E+10 |
| Reduction of variance due to correlation between construction cost and rent--coefficient | 0.50 | 3.80E+09 |
| | | =========== |
| Total variance | | 2.55E+10 |
| Standard deviation | | 159,536 |

## SENSITIVITY TABLES

| Cost/SqFt | +BID VALUE | |
|---|---|---|
| 1.00 | 2,354,046 | (48,000) |
| 2.00 | 2,306,046 | (48,000) |
| 3.00 | 2,258,046 | |

| Rent | +BID VALUE | |
|---|---|---|
| 749 | 2,302,883 | 3,164 |
| 750 | 2,306,046 | 3,164 |
| 751 | 2,309,210 | |

| Op_exp | +BID VALUE | |
|---|---|---|
| 26.0% | 2,338,550 | (32,503) |
| 27.0% | 2,306,046 | (32,503) |
| 28.0% | 2,273,543 | |

| Vacancy | +BID VALUE | |
|---|---|---|
| 4.0% | 2,331,023 | (24,976) |
| 5.0% | 2,306,046 | (24,976) |
| 6.0% | 2,281,070 | |

| Cap | +BID VALUE | |
|---|---|---|
| 9.0% | 2,316,503 | 2,183 |
| 9.1% | 2,314,319 | 2,136 |
| 9.2% | 2,312,184 | 2,090 |
| 9.3% | 2,310,094 | 2,045 |
| 9.4% | 2,308,049 | 2,002 |
| 9.5% | 2,306,046 | 1,961 |
| 9.6% | 2,304,086 | 1,920 |
| 9.7% | 2,302,166 | 1,881 |
| 9.8% | 2,300,285 | 1,843 |
| 9.9% | 2,298,442 | 1,806 |
| 10.0% | 2,296,636 | |

(1)

## MACROS

```
\A   /RNC{?}~~{DOWN}              NAME RANGES

\M   /M~{?}~                      MOVE

\P   /PPR{?}~                     PRINT EXHIBITS
     OMR220~ML10~MT0~
     S{ESC}\027E\027&l10\027&k2S~QAGPQ

\E   /RE~{DOWN}                   RANGE ERASOR

\R   /RND{?}~                     RANGE NAME ERASOR

\Z   /FS~R                        SAVE FILE

\C   /C~{?}~                      COPIER

\X   /PF{?}~RR{?}~                PRINT TO FILE
     OMR240~OUQGQ                 FOR SIDEWAYS

\S   {GOTO}TABLE1~/XG\Q~

\Q   /C~N27~/XIN27=-1~{GOTO}1~{UP}{UP}{UP}/XQ~
     /C~N32~/C~N34~/C~N36~
     {GOTO}
             (1)                  (INPUT CELL)
     0~{EDIT}{CALC}~
     {END}{UP}
     /DT1{BS}.{END}{RIGHT}
     {END}{DOWN}~
     Cap                          (INPUT CELL)
     ~{GOTO}
     Cap                          (INPUT CELL)
     0~/RE~+
     Cap                          (INPUT CELL)
     ~{END}{DOWN}{END}{DOWN}
     /XG\Q~
```

# Exhibit Four

Project: Condominium Development Template
By: Eric A. Knapp
Date: 15-Aug-86

| | | | |
|---|---|---|---|
| Asking Price | 6,100,000 | Price/SqFt Building | 127.08 |
| Months Carry | 12 | Price/Apartment | 145,238 |
| Land Area | 40,000 | Price/SqFt Land | 152.50 |
| Floor Area Ratio | 1.20 | Buildable SqFt | 48,000 |
| Efficiency | 85% | Usable SqFt | 40,800 |
| Development Fee Percen | 3.0% | Development Fee | 201,600 |
| Construction Cost/SqFt | 5.00 | Construction Cost | 441,600 |
| Apartments | 42 | Average SqFt/Apartment | 971 |
| Average Sales Price | 160,000 | Sales Price/SqFt | 165 |
| Annual Expenses | 100,000 | Gross Income | 6,720,000 |
| Mortgage Ratio | 70% | Loan | 4,704,000 |
| Interest Rate | 10.50% | Payment | 493,920 |
| Note | 600,000 | Note Payment | 72,000 |
| Note Interest Rate | 12.00% | Cost of Carry | 665,920 |
| Required Return | 25.0% | Net Income | 308,480 |
| Equity Required | 1,237,600 | ROE At Asking Price | 24.9% |
| Bid Value | 6,096,320 | Plus or Minus | 566,061 |

| Input Parameter | Mean | Standard Deviation | Sensitivity Coefficient | Variance |
|---|---|---|---|---|
| Con. Cost | $5.00 | $1.00 | (240,000) | 5.76E+10 |
| Sale Price | $160,000 | $5 ,000 | 61,152 | 9.35E+10 |
| Expense | 100,000 | 10 ,000 | (4,000) | 1.60E+09 |
| Carry | 12 | 2 months | (221,973) | 1.97E+11 |

| | | |
|---|---|---|
| Subtotal of Variance | | 3.50E+11 |
| Reduction of variance due to correlation between construction cost and rent--coefficient | 0.20 | 2.94E+10 |
| | | =========== |
| Total variance | | 3.20E+11 |
| Standard deviation | | 566,061 |

SENSITIVITY TABLES

| Cost/SqFt | +BID VALUE | |
|---|---|---|
| 4.00 | 6,336,320 | (240,000) |
| 5.00 | 6,096,320 | (240,000) |
| 6.00 | 5,856,320 | |

| Sale Price | +BID VALUE | |
|---|---|---|
| 159,000 | 6,035,168 | 61,152 |
| 160,000 | 6,096,320 | 61,152 |
| 161,000 | 6,157,472 | |

| Expenses | +BID VALUE | |
|---|---|---|
| 99,000 | 6,100,320 | (4,000) |
| 100,000 | 6,096,320 | (4,000) |
| 101,000 | 6,092,320 | |

| Carry | +BID VALUE | |
|---|---|---|
| 11 | 6,318,293 | (221,973) |
| 12 | 6,096,320 | (221,973) |
| 13 | 5,874,347 | |

| | +BID VALUE | |
|---|---|---|
| | 2,316,503 | 2,183 |
| | 2,314,319 | 2,136 |
| | 2,312,184 | 2,090 |
| | 2,310,094 | 2,045 |
| | 2,308,049 | 2,002 |
| | 2,306,046 | 1,961 |
| | 2,304,086 | 1,920 |
| | 2,302,166 | 1,881 |
| | 2,300,285 | 1,843 |
| | 2,298,442 | 1,806 |
| | 2,296,636 | |
| (1) | | |

MACROS

```
\A   /RNC{?}~~{DOWN}           NAME RANGES

\M   /M~{?}~                   MOVE

\P   /PPR{?}~                  PRINT EXHIBITS
     OMR240~ML10~MT0~
     S{ESC}\027E\027&l10\027&k2S~QAGPQ

\E   /RE~{DOWN}                RANGE ERASOR

\R   /RND{?}~                  RANGE NAME ERASOR

\Z   /FS~R                     SAVE FILE

\C   /C~{?}~                   COPIER

\X   /PF{?}~RR{?}~             PRINT TO FILE
     OMR240~OUQGQ              FOR SIDEWAYS

\S   {GOTO}TABLE1~/XG\Q~

\Q   /C~N27~/XIN27=-1~{GOTO}1~{UP}{UP}{UP}/XQ~
     /C~N32~/C~N34~/C~N36~
     {GOTO}
           (1)                 (INPUT CELL)
     0~{EDIT}{CALC}~
     {END}{UP}
     /DT1{BS}.{END}{RIGHT}
     {END}{DOWN}~
     Carry                     (INPUT CELL)
     ~{GOTO}
     Carry                     (INPUT CELL)
     0~/RE→
     Carry                     (INPUT CELL)
     ~{END}{DOWN}{END}{DOWN}
     /XG\Q~
```

# Exhibit Five

Project: Office Development Template

| | | | |
|---|---|---|---|
| Asking Price | 3,100,000 | Price/SqFt Land | 77.50 |
| Land Area | 40,000 | Price/SqFt Building | 77.50 |
| Floor Area Ratio | 1.00 | Buildable SqFt | 40,000 |
| Efficiency | 73% | Usable SqFt | 29,120 |
| Construction Cost/SqFt | 2.00 | Construction Cost | 80,000 |
| Rent/SqFt | 18.50 | Gross Rent | 538,720 |
| Vacancy | 5% | Effective | 511,784 |
| Operating Expenses | 32% | Net Income | 348,612 |
| Cap Rate | 9.5% | Project Value | 3,669,600 |
| Mortgage Ratio | 80% | Loan | 2,935,680 |
| Interest Rate | 10.50% | Payment | 322,246 |
| Note | 100,000 | Note Payment | 9,655 |
| Note Interest Rate | 9.00% | NOI After Debt Service | 16,711 |
| Required Return | 12.0% | | |

| | | | |
|---|---|---|---|
| Equity Required | 144,320 | ROE At Asking Price | 11.6% |
| Bid Value | 3,094,936 | Plus or Minus | 303,473 |

| Input Parameter | Mean | Standard Deviation | Sensitivity Coefficient | Variance |
|---|---|---|---|---|
| Con. Cost | $2.00 | $0.50 | (40,000) | 4.00E+08 |
| Rent | $18.50 | $1.00 | 250,396 | 6.27E+10 |
| Expense | 32% | 3 % | (46,323) | 1.93E+10 |
| Vacancy | 5% | 2 % | (48,761) | 9.51E+09 |
| Cap Rate | 9.5% | 5 tenths | 2,642 | 1.75E+08 |

| | | |
|---|---|---|
| Subtotal of Variance | | 9.21E+10 |
| Reduction of variance due to correlation between construction cost and rent--coefficient | 0.00 | 0.00E+00 |
| | | =========== |
| Total variance | | 9.21E+10 |
| Standard deviation | | 303,473 |

## SENSITIVITY TABLES

| Cost/SqFt | +BID VALUE | |
|---|---|---|
| 1.00 | 3,134,936 | (40,000) |
| 2.00 | 3,094,936 | (40,000) |
| 3.00 | 3,054,936 | |

| Rent | +BID VALUE | |
|---|---|---|
| 17.50 | 2,844,540 | 250,396 |
| 18.50 | 3,094,936 | 250,396 |
| 19.50 | 3,345,332 | |

| Op_exp | +BID VALUE | |
|---|---|---|
| 30.9% | 3,141,259 | (46,323) |
| 31.9% | 3,094,936 | (46,323) |
| 32.9% | 3,048,613 | |

| Vacancy | +BID VALUE | |
|---|---|---|
| 4.0% | 3,143,697 | (48,761) |
| 5.0% | 3,094,936 | (48,761) |
| 6.0% | 3,046,175 | |

| Cap | +BID VALUE | |
|---|---|---|
| 9.0% | 3,108,841 | 2,903 |
| 9.1% | 3,105,938 | 2,840 |
| 9.2% | 3,103,098 | 2,779 |
| 9.3% | 3,100,319 | 2,720 |
| 9.4% | 3,097,599 | 2,663 |
| 9.5% | 3,094,936 | 2,607 |
| 9.6% | 3,092,329 | 2,554 |
| 9.7% | 3,089,775 | 2,501 |
| 9.8% | 3,087,274 | 2,451 |
| 9.9% | 3,084,823 | 2,402 |
| 10.0% | 3,082,421 | |

(1)

## MACROS

```
\A   /RNC{?}~~{DOWN}           NAME RANGES

\M   /M~{?}~                   MOVE

\P   /PPR{?}~                  PRINT EXHIBITS
     OMR240~ML10~MT0~
     S{ESC}\027E\027&l10\027&k2S~QAGPQ

\E   /RE~{DOWN}                RANGE ERASOR

\R   /RND{?}~                  RANGE NAME ERASOR

\Z   /FS~R                     SAVE FILE

\C   /C~{?}~                   COPIER

\X   /PF{?}~RR{?}~             PRINT TO FILE
     OMR240~OUQGQ              FOR SIDEWAYS

\S   {GOTO}TABLE1~/XG\Q~

\Q   /C~N27~/XIN27=-1~{GOTO}1~{UP}{UP}{UP}/XQ~
     /C~N32~/C~N34~/C~N36~
     {GOTO}
             (1)               (INPUT CELL)
     0~{EDIT}{CALC}~
     {END}{UP}
     /DT1{BS}.{END}{RIGHT}
     {END}{DOWN}~
     Cap                       (INPUT CELL)
     ~{GOTO}
     Cap                       (INPUT CELL)
     0~/RE~+
     Cap                       (INPUT CELL)
     ~{END}{DOWN}{END}{DOWN}
     /XG\Q~
```

**More Complex Analysis**

Financial analysis is an iterative process in which the successful completion of one level of analysis marks the beginning of another, more complex examination of a project. The analyses just described, however sophisticated in their treatment of risk, do not take account of many factors, such as the growth of revenues and expenses, the rollover of leases, amortization of debt, after tax revenues, or the time value of money. When a property has sucessfully passed the first analysis, the assumptions should be tested and refined, and the project examined by means of discounted cash flow analysis.

The many real estate software packages on the market which do discounted cash flow analysis suffer from the fact that they cannot be easily modified to meet the needs of an individual user or project. Though Lotus 123 was therefore the choice for most discounted cash flow analyses in this paper, one software package, Micro Pro-ject, proved to have enough advantages to outweigh these drawbacks in certain situations.

Micro Pro-ject, available from Financial Automation Ltd., calculates net operating income from very complex lease structures. This is a task which is difficult and time consuming to perform in Lotus 123. Micro Pro-ject uses a menu driven data entry routine to solicit the exact parameters of the individual leases, including options, escalations, participations, recaptures, and any other information typically included in a lease. The program then uses an internal model to calculate net operating income. This information can be output in a detailed format, such as exhibits seven and eight, or exported for use in a Lotus file, such as exhibits nine and ten.

By using Micro Pro-ject for net operating income and Lotus 123 for leveraged after tax calculations, a very precise analysis of a project's probable returns is possible. Unfortunately, it is difficult to perform the same kind of risk analysis on variables which must be routed through Micro Pro-ject. The risk analysis module can be used with little or no alteration, however, in any analysis contained entirely within a Lotus worksheet.

Exhibit Six

# Kenmore Square Office Buildings
## Net Operating Income Statement -- Low Rent Scenario

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INCOME | | | | | | | | | | | |
| BASE RENT: | | | | | | | | | | | |
| GROUPED TENANTS | 581,000 | 644,625 | 862,500 | 1,045,500 | 1,284,000 | 1,284,000 | 1,365,174 | 1,405,761 | 1,488,860 | 1,571,959 | 1,571,959 |
| TOTAL BASE RENT | 581,000 | 644,625 | 862,500 | 1,045,500 | 1,284,000 | 1,284,000 | 1,365,174 | 1,405,761 | 1,488,860 | 1,571,959 | 1,571,959 |
| RECOVERIES: | | | | | | | | | | | |
| Operating Expenses | 141,000 | 0 | 8,347 | 17,112 | 32,740 | 49,149 | 52,454 | 63,583 | 72,025 | 81,417 | 102,360 |
| Real Estate Taxes | 50,357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL RECOVERIES | 191,357 | 0 | 8,347 | 17,112 | 32,740 | 49,149 | 52,454 | 63,583 | 72,025 | 81,417 | 102,360 |
| PERCENTAGE RENT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SALES VOLUME(000) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GROSS RENTAL INCOME | 772,357 | 644,625 | 870,847 | 1,062,612 | 1,316,740 | 1,333,149 | 1,417,628 | 1,469,344 | 1,560,885 | 1,653,376 | 1,674,319 |
| VACANCY ALLOWANCE | (38,618) | (32,231) | (43,542) | (53,131) | (65,837) | (66,657) | (70,881) | (73,467) | (78,044) | (82,669) | (83,716) |
| TOTAL INCOME | 733,739 | 612,394 | 827,305 | 1,009,481 | 1,250,903 | 1,266,492 | 1,346,747 | 1,395,877 | 1,482,841 | 1,570,707 | 1,590,603 |
| EXPENSES | | | | | | | | | | | |
| Operating Expenses | 252,000 | 283,500 | 297,675 | 312,559 | 328,187 | 344,596 | 361,826 | 379,917 | 398,913 | 418,858 | 439,801 |
| Real Estate Taxes | 90,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 |
| MANAGEMENT FEE | 14,675 | 12,248 | 16,546 | 20,190 | 25,018 | 25,330 | 26,935 | 27,918 | 29,657 | 31,414 | 31,812 |
| TOTAL EXPENSES | 356,675 | 466,748 | 485,221 | 503,749 | 524,205 | 540,926 | 559,761 | 578,835 | 599,570 | 621,272 | 642,613 |
| NET OPERATING INCOME | 377,064 | 145,646 | 342,084 | 505,733 | 726,698 | 725,566 | 786,986 | 817,042 | 883,271 | 949,435 | 947,990 |
| CASH FLOW FROM OPERATIONS | 377,064 | 145,646 | 342,084 | 505,733 | 726,698 | 725,566 | 786,986 | 817,042 | 883,271 | 949,435 | 947,990 |
| COMMISSIONS | 0 | 64,800 | 0 | 59,400 | 0 | 0 | 86,717 | 0 | 89,316 | 0 | 0 |
| ALTERATIONS | 0 | 2,120,000 | 0 | 1,480,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NET CASH FLOW | 377,064 | (2,039,154) | 342,084 | (1,033,667) | 726,698 | 725,566 | 700,269 | 817,042 | 793,955 | 949,435 | 947,990 |

Exhibit Seven

Kenmore Square Office Buildings

Net Operating Income Statement -- High Rent Scenario

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **INCOME** | | | | | | | | | | | |
| BASE RENT: | | | | | | | | | | | |
| GROUPED TENANTS | 581,000 | 822,500 | 1,113,000 | 1,401,436 | 1,745,372 | 1,745,372 | 1,853,604 | 1,907,720 | 2,018,519 | 2,129,317 | 2,129,317 |
| TOTAL BASE RENT | 581,000 | 822,500 | 1,113,000 | 1,401,436 | 1,745,372 | 1,745,372 | 1,853,604 | 1,907,720 | 2,018,519 | 2,129,317 | 2,129,317 |
| RECOVERIES: | | | | | | | | | | | |
| Operating Expenses | 141,000 | 0 | 8,347 | 17,112 | 32,740 | 49,149 | 52,454 | 63,583 | 72,025 | 81,417 | 102,360 |
| Real Estate Taxes | 50,357 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL RECOVERIES | 191,357 | 0 | 8,347 | 17,112 | 32,740 | 49,149 | 52,454 | 63,583 | 72,025 | 81,417 | 102,360 |
| PERCENTAGE RENT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SALES VOLUME(000) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GROSS RENTAL INCOME | 772,357 | 822,500 | 1,121,347 | 1,418,548 | 1,778,112 | 1,794,521 | 1,906,058 | 1,971,303 | 2,090,544 | 2,210,734 | 2,231,677 |
| VACANCY ALLOWANCE | ( 38,618) | ( 41,125) | ( 56,067) | ( 70,927) | ( 88,906) | ( 89,726) | ( 95,303) | ( 98,565) | ( 104,527) | ( 110,537) | ( 111,584) |
| TOTAL INCOME | 733,739 | 781,375 | 1,065,280 | 1,347,621 | 1,689,206 | 1,704,795 | 1,810,755 | 1,872,738 | 1,986,017 | 2,100,197 | 2,120,093 |
| **EXPENSES** | | | | | | | | | | | |
| Operating Expenses | 252,000 | 283,500 | 297,675 | 312,559 | 328,187 | 344,596 | 361,826 | 379,917 | 398,913 | 418,858 | 439,801 |
| Real Estate Taxes | 90,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 | 171,000 |
| MANAGEMENT FEE | 14,675 | 15,628 | 21,306 | 26,952 | 33,784 | 34,096 | 36,215 | 37,455 | 39,720 | 42,004 | 42,402 |
| TOTAL EXPENSES | 356,675 | 470,128 | 489,981 | 510,511 | 532,971 | 549,692 | 569,041 | 588,372 | 609,633 | 631,862 | 653,203 |
| NET OPERATING INCOME | 377,064 | 311,248 | 575,299 | 837,109 | 1,156,235 | 1,155,103 | 1,241,714 | 1,284,366 | 1,376,384 | 1,468,335 | 1,466,890 |
| CASH FLOW FROM OPERATIONS | 377,064 | 311,248 | 575,299 | 837,109 | 1,156,235 | 1,155,103 | 1,241,714 | 1,284,366 | 1,376,384 | 1,468,335 | 1,466,890 |
| COMMISSIONS | 0 | 86,400 | 0 | 79,200 | 0 | 0 | 115,623 | 0 | 119,087 | 0 | 0 |
| ALTERATIONS | 0 | 2,120,000 | 0 | 1,480,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NET CASH FLOW | 377,064 | (1,895,153) | 575,299 | ( 722,091) | 1,156,235 | 1,155,103 | 1,126,091 | 1,284,366 | 1,257,297 | 1,468,335 | 1,466,890 |

# Exhibit Eight
## Kenmore Square Office Buildings
## Leveraged After Tax Analysis -- Low Rent Scenario

| | |
|---|---|
| Purchase Price | 4,100,000 |
| Mortgage Ratio | 80% |
| Mortgage | 3,280,000 |
| Equity Required | 820,000 |
| Permanent Financing | |
| Rate | 10.5% |
| Term | 30 |
| Construction Financing | |
| Rate | 12.0% |
| Term | 30 |
| Cap on sale | 9.0% |
| Tenant Equity Participation | 25% |
| Sales Commisions | 4.5% |

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EGI | 733,739 | 612,394 | 827,305 | 1,009,481 | 1,250,903 | 1,266,492 | 1,346,747 | 1,395,877 | 1,482,841 | 1,570,707 | 1,590,603 |
| NOI BEFORE ALT&COM | 377,064 | 145,646 | 342,084 | 505,733 | 726,698 | 725,566 | 786,986 | 817,042 | 883,271 | 949,435 | 947,990 |
| NOI AFTER ALT&COM | 377,064 | (2,039,154) | 342,084 | (1,033,667) | 726,698 | 725,566 | 700,269 | 817,042 | 793,955 | 949,435 | 947,990 |
| Tenant Improvements | | 2,120,000 | | 1,480,000 | | | | | | | |
| NOI Before T/I | 377,064 | 80,846 | 342,084 | 446,333 | 726,698 | 725,566 | 700,269 | 817,042 | 793,955 | 949,435 | 947,990 |
| Permanent Debt Service | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 |
| Construction Financing | | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 |
| | | | | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 |
| Total Debt Service | 360,041 | 621,720 | 621,720 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 |
| NOI after Debt Service | 17,023 | (540,874) | (279,636) | (358,069) | (77,704) | (78,836) | (104,133) | 12,640 | (10,447) | 145,033 | 143,588 |
| Tenant Equity Participation | 4,256 | 0 | 0 | 0 | 0 | 0 | 0 | 3,160 | 0 | 36,258 | 35,897 |
| Net Cash Flow | 12,767 | (540,874) | (279,636) | (358,069) | (77,704) | (78,836) | (104,133) | 9,480 | (10,447) | 108,775 | 107,691 |

| | |
|---|---|
| Sale Price | 10,533,222 |
| Permanent Debt | (3,005,214) |
| Construction Debt | (2,002,994) |
| | (1,424,665) |
| Sales Commisions | (473,995) |
| Gain On Sale | 3,626,355 |
| Tenant Equity Participation | 906,589 |
| Net Gain On Sale | 2,719,766 |

CASH FLOW PROJECTIONS

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tenant | | 4,256 | 0 | 0 | 0 | 0 | 0 | 0 | 3,160 | 0 | 942,847 |
| Developer | (820,000) | 12,767 | (540,874) | (279,636) | (358,069) | (77,704) | (78,836) | (104,133) | 9,480 | (10,447) | 2,828,541 |

| | Tenant | Developer |
|---|---|---|
| Net Present Value At 15% | 237,791 | (1,019,031) |
| Net Present Value At 18% | 184,592 | (1,107,770) |
| Net Present Value At 28% | 83,626 | (1,226,150) |
| Internal Rate of Return | | 3.0% |

# Exhibit Nine
## Kenmore Square Office Buildings
## Leveraged After Tax Analysis -- High Rent Scenario

| | |
|---|---|
| Purchase Price | 4,100,000 |
| Mortgage Ratio | 80% |
| Mortgage | 3,280,000 |
| Equity Required | 820,000 |
| Permanent Financing | |
| Rate | 10.5% |
| Term | 30 |
| Construction Financing | |
| Rate | 12.0% |
| Term | 30 |
| Cap on sale | 9.0% |
| Tenant Equity Participation | 25% |
| Sales Commisions | 4.5% |

| | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EGI | 733,739 | 781,375 | 1,065,280 | 1,347,621 | 1,689,206 | 1,704,795 | 1,810,755 | 1,872,738 | 1,986,017 | 2,100,197 | 2,120,093 |
| NOI BEFORE ALT&COM | 377,064 | 311,248 | 575,299 | 837,109 | 1,156,235 | 1,155,103 | 1,241,714 | 1,284,366 | 1,376,384 | 1,468,335 | 1,466,890 |
| NOI AFTER ALT&COM | 377,064 | (1,895,153) | 575,299 | (722,091) | 1,156,235 | 1,155,103 | 1,126,091 | 1,284,366 | 1,257,297 | 1,468,335 | 1,466,890 |
| Tenant Improvements | | 2,120,000 | | 1,480,000 | | | | | | | |
| NOI Before T/I | 377,064 | 224,847 | 575,299 | 757,909 | 1,156,235 | 1,155,103 | 1,126,091 | 1,284,366 | 1,257,297 | 1,468,335 | 1,466,890 |
| Permanent Debt Service | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 | 360,041 |
| Construction Financing | | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 | 261,679 |
| | | | | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 | 182,682 |
| Total Debt Service | 360,041 | 621,720 | 621,720 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 | 804,402 |
| NOI after Debt Service | 17,023 | (396,873) | (46,421) | (46,493) | 351,833 | 350,701 | 321,689 | 479,964 | 452,895 | 663,933 | 662,488 |
| Tenant Equity Participation | 4,256 | 0 | 0 | 0 | 87,958 | 87,675 | 80,422 | 119,991 | 113,224 | 165,983 | 165,622 |
| Net Cash Flow | 12,767 | (396,873) | (46,421) | (46,493) | 263,875 | 263,026 | 241,267 | 359,973 | 339,671 | 497,950 | 496,866 |

| | |
|---|---|
| Sale Price | 16,298,778 |
| Permanent Debt | (3,005,214) |
| Construction Debt | (2,002,994) |
| | (1,424,665) |
| Sales Commisions | (733,445) |
| Gain On Sale | 9,132,461 |
| Tenant Equity Participation | 2,283,115 |
| Net Gain On Sale | 6,849,345 |

CASH FLOW PROJECTIONS

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tenant | | 4,256 | 0 | 0 | 0 | 87,958 | 87,675 | 80,422 | 119,991 | 113,224 | 2,449,098 |
| Developer | (820,000) | 12,767 | (396,873) | (46,421) | (46,493) | 263,875 | 263,026 | 241,267 | 359,973 | 339,671 | 7,347,295 |

| | Tenant | Developer |
|---|---|---|
| Net Present Value At 15% | 792,360 | 1,199,880 |
| Net Present Value At 18% | 625,163 | 718,226 |
| Net Present Value At 28% | 299,519 | (203,130) |
| Internal Rate of Return | | 24.9% |

### Post-offer Analysis

In the period between the acceptance of an offer and the closing the buyer should check and verify all data and assumptions and perform the most sophisticated analysis possible. The seller's books should be examined. Leases should be verified by contacting the tenants directly and asking for written acknowledgements of the terms. Operating expenses should be checked against the most recent year's bills. They should also be compared to the experiences of similar projects to detect errors of omission. If the buyer does not have data on comparable projects, he should consider using facilities such as the Institute of Real Estate Management's On-Line Database.

The property should be physically inspected by someone who is capable of detecting any structural or mechanical deficiencies which were not disclosed by the seller. Any discrepencies which are noted as a result of these examinations should be incorporated into the financial analysis. If the differences are significant, the seller should be pressured to adjust his terms to provide the buyer with the investment which was originally represented to him.

After the closing, it is often a good idea to have the building remeasured. Junior architectural employees will often provide this service at a very modest cost. They should be made aware that the buyer is looking for the highest defensible square footage. Increases in the area of a building based on a remeasuing can serve as the basis of future lease negotiations, and dramatically improve a project's financial performance.

# CHAPTER FIVE

# NEGOTIATION

## The Initial Approach

One of the most important issues in negotiating a real estate transaction is how the initial contact is made. First impressions can determine whether an opportunity will be pursued or they can cripple a negotiation from the outset.

### Contacting the Seller on the Telephone

There are a number of advantages to making the initial approach by telephone. The buyer is able to do some research before the contact is made, and have the information spread out before him as the conversation takes place. He is able to do rapid analyses based on information provided by the seller during the conversation without appearing calculating. The buyer also does not have to worry about lacking credibility because of a youthful or casual appearance.

The seller is approached in an environment in which he has some privacy and feels comfortable. He does not feel as much put on the spot by the offer; it is much easier to interrupt a telephone conversation than it is to ask a visitor to leave. If it is impossible or inconvenient to discuss the matter at that time, or if the seller is completely uninterested in selling, little of either parties time is wasted.

### Contacting the Seller In Person

When making the initial contact in person the buyer should be very aware of issues of appearance. The manner in which the buyer presents himself in this situation can have a great effect on the possibilities for a sale. If his appearance is too casual he may never be able to build enough credibility to convinve the seller to agree to an expensive and complicated transaction. If his appearance is too formal he may be stereotyped as a slick, fast talking carpetbagger, provoking the seller to suspicious, hostile, or exploitive behavior.

The buyer should be very careful how he communicates his interest. He must get the seller's attention without indicating how much he really desires the property or exciting the seller to think that it is worth more than is realistic. An approach such as, "I was just driving by and noticed your property. I was wondering if you had ever considered selling it?" is good because it broaches the subject while remaining noncommittal.

Contacting owners in person is a sensitive occupation. Owner's reactions range from suspicion to delight. The buyer must rapidly adjust his approach to these reactions. There is rarely a chance to recover from a faux pas. The buyer must be personable and quick witted. A more detailed treatment of the art of "cold calling" should provide enough interesting material for another thesis.

When confronted with such an approach, owners frequently ask buyers how much they think the property is worth. This puts the buyer in a very difficult position. If he bids less than he thinks the property is worth, he may find a bargain, but his offer stands a good chance of being dismissed. If he bids as high as possible, he is likely to get the owner's attention, but he may not be able to persuade him to accept a lower price later on, even if it is found to be more realistic.

The difficulty of making such on the spot appraisals is complicated by the imperfect information which is available and the limited time and means which are available to carry it out. The buyer may choose to respond to such a request by quoting a range of prices, or by holding his response until he can obtain more information. The buyer can also defer such a query by responding that he needs time to make a <u>responsible</u> offer, a reply which has the additional advantage of reinforcing the buyer's credibility with the seller.

## Negotiating Style

The person who would profitably pursue acquisitions must develop a personality and style which others can trust and, hopefully, enjoy and respect. The buyer should therefore be an ardent student of negotiations. Since negotiation is the subject of its own considerable body of literature, it is not addressed in detail here.

## Deal Structure

Deal structuring is negotiation which arrives at a result of percieved mutual benefit. Price is only one of the items in this bargaining. It may even be a relatively small one, given the special needs of many sellers. The importance of deal structure is illustrated by the comment attributed to Bill Zeckendorf, "You name the price and I'll name the terms". The real estate market is sufficiently competitive to provide few opportunities based on price. The successful buyer's advantage is often his ability to envision unconventional developments and structure complex transactions.

## The Offer

A major function of an offer is to tie up a property long enough for the buyer to investigate it carefully without the risk of losing it to interlopers. It is almost never possible to gather enough information before making an offer to establish a firm and fair price. The prudent buyer will therefore make his offer contingent on the satisfaction of his concerns. It is almost always possible to include contingencies which the buyer can prevent from being satisfied, thereby invalidating the contract. Thus, the offer does not necessarily establish the price and the terms at which the buyer will purchase the property.

The contingencies are typically listed on a rider to a standard "Offer to Purchase Real Estate", or "offer sheet".

The offer can be recast in more or less legal and technical language, as befits the situation. An example of such a rider is shown on the following page.

Exhibit Eleven

RIDER TO OFFER ON SWAMPLAND ESTATES
BY
WEIR, GOODE, AND HOWE

This offer contingent upon the following:

1. Execution of a mutually satisfactory purchase and sales agreement.

2. Good, marketable, and insurable record title to the property.

3. The buyer's right to review and approve pending lease agreements.

4. 80% financing at prevailing rates and terms. Two fifteen-day extensions of the closing shall be granted if necessitated by lender financing delays.

5. A mutually satisfactory leaseback agreement between the buyer and the seller.

6. Receipt and approval of all books, records, leases, contracts, underlying encumbrances, and preliminary title report on the property.

7. Unrestricted access on 24 hours advance notice for physical inspection and approval of the property, including compliance with all federal, state, local, and municipal building, zoning, and environmental laws and regulations.

8. No knowledge on the part of the seller of any pending litigation which would affect the properties, including emininent domain proceedings or takings.

Unless the parties agree in writing to all material terms of the transaction contemplated within sixty (60) days, this transaction shall be null and void and without recourse to either party, and any and all monies paid by either party shall be immmediately refunded.

In addition to contingencies specific to the unique attributes of the buyer, the seller, and the property, a well crafted offer should contain:

1) A deposit to bind the offer which is large enough to establish the buyer's credibility with the seller.

2) A selling price and terms that are generous enough to induce the buyer to accept the offer, but not so inflated that the seller will be outraged and refuse to sell if the deal must be renegotiated.

3) Contingencies which will prevent the buyer from ever having to go through with the deal unwillingly.

Such an offer is more like a short term refundable option to purchase a property than a binding offer to purchase it at a fixed price and terms.

## Situations to Avoid

**Community Parks and Gardens**

The buyer should avoid property which is being used with any continuity as a community garden or park. Appearances are deceiving: what looks like a garden is actually a graveyard for developers. The buyer should count the number of individual plots in the garden or the number of visitors on a Saturday afternoon. Many of those families will show up to denounce the development at every public meeting and to every public official who will listen. The developer should expect to compete with ax murderers as an example of villainy in the local press and media. He should not expect to do much business in the area again.

**Hazardous Waste**

The potential liabilities associated with property which contains toxic wastes can dwarf the net worth of even large companies. The buyer should avoid properties which have any likelihood of containing such wastes, unless he has the property thoroughly inspected (preferably done in cooperation with the appropriate community and municipal bodies) <u>and</u> indemnification from the seller.

**Overpaying**

The buyer must resign himself to being outbid on many properties. This is the discipline which must be maintained to avoid overpaying on all one's bids. A seller will often say that he has a higher price. Sometimes this is the truth and sometimes it is a bluff. In such cases, the buyer should avoid getting into a bidding war. He should inform the seller that he will pursue alternative opportunities, and invite him to get back in touch if the situation changes. Many competing offers fail to close, and the seller must reapproach the buyer in a weaker negotiating position.

## Closing

Most closings are uneventful events at which the parties sign agreements which have already been reviewed by their lawyers and other advisors. Occasionally, however, one party will try to take advantage of his opponents desire to close a deal by making last minute changes or demands. This tactic is sometimes known as the "salami treatment", since it aims to get everything, one slice at a time.

## Special Cases

### Unwilling Sellers

Some of the greatest obstacles to negotiating an agreement with the owner of a property which is not on the market arise from the seller's problems after the sale. Elderly owners may be emotionally attached to a property and have difficulty finding a satisfactory replacement with their profits. Owners of commercial property, especially family businesses, may be unable to relocate their operations or find other menaingful activity. Their responses range from "What about my employees?" to "It will ruin my marriage". The successful buyer of such a property should keep the seller's non-monetary issues uppermost in his mind.

### Owner Joint Ventures

Owners who do not wish to sever their ties with a property, or who find the buyer's development plans compelling, may be induced to contribute their property to a joint venture. This is a good proposition for the developer, since it eliminates the cost of acquisition. It is especially attractive when the seller has superior local connections which reduce the risks of opposition or delay in the regulatory process. The buyer should attempt to keep owners who enjoy such good local relations involved in a project through joint ventures or contingent offers.

**Sale/Leasebacks**

Another form of owner participation is the sale/leaseback. This arrangement benefits the seller by allowing him to raise capital from his property without otherwise disrupting his operations. It benefits the buyer by reducing the risks of leasing the building. The value of this risk reduction depends on the creditworthiness of the tenant. The buyer should evaluate the security provided by the tenant and price the deal accordingly.

**Tenant Control Cases**

Some properties are effectively controlled by tenants with advantageous leases or options. In such cases the buyer must negotiate with the tenant as well as the owner. In many cases the buyer must offer a deal with at least the present value of the lease to persuade the tenant to relinquish his rights. The costs of such a package, or of the continued tenancy, must be considered in formulating the price of the property.

**Tenant Equity Participations**

Tenant equity participations are viewed with distaste by many established developers. The client's natural reluctance to part with some of his profits should be balanced, however, against the advantages of a fully tenanted building. Tenant equity participation agreements are typically written for a term of ten years or longer at rents which are at or above market rates. The client strengthens his revenues without incurring any additional fixed liabilities. Young, aggressive developers may find that these agreements provide them with significant market penetration, even in a soft market, while reducing one of their most significant risks, that of leasing their building. As long as the developer can achieve his required returns, he should have no reservations about entering into such arrangements.

**Assemblies**

In a traditional assembly, secrecy is essential to acquiring the needed parcels without being forced to pay premium costs to sellers who have become aware of the assembly and the value it creates. An alternative to this approach, when speed is more important than secrecy, is to make an offer to all the sellers, conditioned on the requirement that it is accepted by everyone or not at all. This approach converts a negotiation which pits everyone against the buyer to one which forces the sellers to negotiate with each other.

**Purchase Money Mortgages**

Purchase money mortgages have become a very important part of deal structuring. The rapid increase in real estate values in the Boston area has created a situation in which the client's first mortgage puts a considerable amount of money in the seller's pockets, even before a down payment is taken into account. This is a source of capital which can be tapped to finance the sale. The seller often has more money than he needs, even if he is investing in another property. Many sellers are willing to use this money to close the deal. This is a classic "win-win" negotiation. The buyer borrows at better rates and terms than he could get from another lender. The seller earns a better return on a secured investment than he could get from a bank or a mutual fund.

## CHAPTER SIX

## CONCLUSION

The limitations of this paper highlight the difficulty of treating real estate acquisition in an academic manner. Success in the field of real estate acquisition depends on a combination of creative, analytic, and personal skills. This paper, however useful, cannot be a substitute for experience or formal training. Those who are interested in the field may want to consider acquiring additional skills through these methods.

The conclusion of a real estate acquisition is, in reality, only the beginning of a real estate development. Acquisitions specialists are often justly criticized for lacking interest in following through with their deals. The reader should remember that project management is at least as important to the eventual success or failure of a development as acquiring the property on the most favorable terms.

In the final analysis, there is really no substitute for getting out there and hustling for deals. This paper grew out of a search for projects to be the subject of a site specific thesis. The process proved to be so challenging and exciting that it became the focus of the research. It is hoped that all who approach the subject of real estate acquisition do so with a similar spirit of adventure.

## NOTES

[1] There are a number of less well known methods of doing discounted cash flow analysis. These methods have been discussed extensively in financial publications, but a consensus on them has yet to emerge. For those who are interested, a number of them are available on software known as The Financial Abacus <Aaron Nelson & Associates, 3695 West 3800 South, Salt Lake City, Utah, 84120, (801) 964-9300>. The main practical objection to alternative rates of return is that they do not have the familiarity and acceptance of net present value and internal rate of return.

[2] The soundness of this approach, which applies principles of probability and statistics to the problem of aggregating project risk, was confirmed in conversations with William Wheaton, associate professor of economics, and Thomas Steele, guest lecturer in real estate finance, and by an article in Real Estate Review (Vol. 16, No.1 / Spring 1986), "Quantifying Uncertainty in Investment Analysis" by K.B. Cady, C.S. Pettygrove, and D.K. Westby.